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SPACE OPERATIONS CONTROL CENTER

SATELLITE SITUATION REPORT

VOL. 4, NO. 12

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JUNE 30, 1964



GODDARD SPACE FLIGHT CENTER

GREENBELT, MD.

SPACE OPERATIONS CONTROL CENTER
GODDARD SPACE FLIGHT CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

VOLUME 4 NO. 12

JUNE 30, 1964

SATELLITE SITUATION REPORT

THE FOLLOWING REPORT REFLECTS DATA COMPUTED AND COMPILED BY
THE GODDARD SPACE FLIGHT CENTER, NORAD, AND SMITHSONIAN ASTROPHSICAL
OBSERVATORY AS OF 1200Z ON JUNE 30, 1964.

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>NODAL PERIOD</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1958 LAUNCHES									
ALPHA 1	EXPLORER 1	004	US	1 FEB	104.6	33.18	1604	341	
BETA 1	ROCKET BODY	016	US	17 MAR	138.4	34.28	4322	647	
BETA 2	VANGUARD 1	005	US	17 MAR	134.0	34.25	3958	630	108.012 &
1959 LAUNCHES									
ALPHA 1	VANGUARD 2	011	US	17 FEB	125.4	32.87	3284	557	
ALPHA 2	ROCKET BODY	012	US	17 FEB	129.7	32.85	3662	551	
ETA 1	VANGUARD 3	020	US	18 SEP	129.8	33.34	3723	506	
MU 1	LUNIK 1	112	USSR	2 JAN	HELIOCENTRIC ORBIT				
NU 1	PIONEER 4	113	US	3 MAR	HELIOCENTRIC ORBIT				
IOTA 1	EXPLORER 7	022	US	13 OCT	101.2	50.31	1074	551	
IOTA 2	ROCKET BODY	023	US	13 OCT	100.9	50.29	1052	551	
1960 LAUNCHES									
ALPHA 1	PIONEER 5	027	US	11 MAR	HELIOCENTRIC ORBIT				
BETA 1	ROCKET BODY	028	US	1 APR	99.1	48.40	749	683	
BETA 2	TIROS 1	029	US	1 APR	99.2	48.38	742	697	
BETA 3	NONE	101	US	1 APR	97.9	48.49	704	609	
BETA 4	NONE	115	US	1 APR	99.9	48.16	799	706	
GAMMA 2	TRANSIT 1B	031	US	13 APR	93.9	51.23	586	347	
GAMMA 4	NONE	099	US	13 APR	96.7	51.27	721	484	
EPSILON 3	NONE	036	USSR	15 MAY	91.2	64.98	407	257	
ZETA 1	MIDAS 2	043	US	24 MAY	94.3	33.01	502	465	
ETA 1	TRANSIT 2A	045	US	22 JUN	101.6	66.72	1062	610	
ETA 2	GREB	046	US	22 JUN	101.6	66.71	1058	611	
ETA 3	ROCKET BODY	047	US	22 JUN	101.4	66.71	1044	606	

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1960 LAUNCHES (CONT 'D)									
IOTA 1	ECHO I	049	US	12 AUG	114.3	47.32	1859	985	
IOTA 2	ROCKET BODY	050	US	12 AUG	118.1	47.24	1679	1508	
IOTA 3	METAL OBJECT	051	US	12 AUG	118.2	47.24	1679	1524	
IOTA 4	METAL OBJECT	052	US	12 AUG	CURRENT ELEMENTS NOT MAINTAINED				
IOTA 5	METAL OBJECT	053	US	12 AUG	118.4	47.30	1696	1524	
NU 1	COURIER 1B	058	US	4 OCT	107.0	28.31	1213	963	
NU 2	ROCKET BODY	059	US	4 OCT	106.6	28.27	1205	926	
XI 1	EXPLORER 8	060	US	3 NOV	112.3	49.94	2247	419	
XI 2	ROCKET BODY	062	US	3 NOV	111.9	49.95	2221	405	
XI 3	NONE	069	US	3 NOV	109.3	49.39	1985	399	
XI 4	NONE	105	US	3 NOV	110.6	50.51	2084	422	
PI 1	TIROS 2	063	US	23 NOV	98.2	48.52	735	613	
PI 2	ROCKET BODY	064	US	23 NOV	98.1	48.50	721	614	
PI 3	NONE	074	US	23 NOV	98.2	48.49	733	607	
PI 4	NONE	075	US	23 NOV	98.3	48.50	730	623	
1961 LAUNCHES									
ALPHA 1	SAMOS 2	070	US	31 JAN	94.7	97.40	543	469	
ALPHA 2	METAL OBJECT	079	US	31 JAN	94.6	97.41	537	469	
GAMMA 1	VENUS PROBE	080	USSR	12 FEB	HELIOCENTRIC ORBIT				
DELTA 2	ROCKET BODY	082	US	16 FEB	118.5	38.84	2592	636	
DELTA 3	NONE	085	US	16 FEB	CURRENT ELEMENTS NOT MAINTAINED				
KAPPA 1	EXPLORER 10	098	US	25 MAR	POSITION UNCERTAIN				
NU 1	EXPLORER 11	107	US	27 APR	108.0	28.78	1783	477	
OMICRON 1	TRANSIT 4A	116	US	29 JUN	103.8	66.83	1002	877	
OMICRON 2	INJUN-SR-3	117	US	29 JUN	103.8	66.83	1003	877	150;400
OMICRON 3-206	METAL OBJECTS		US	29 JUN					
RHO 1	TIROS 3	162	US	12 JUL	100.4	47.90	823	732	

OBJECTS IN ORBIT

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1961 LAUNCHES (CONT 'D)									
• RHO 2	ROCKET BODY	165	US	12 JUL	100.3	47.90	813	735	
RHO 3	METAL OBJECT	166	US	12 JUL	98.8	47.94	796	610	
RHO 4	METAL OBJECT	167	US	12 JUL	102.0	47.85	930	776	
• SIGMA 1	MIDAS 3	163	US	12 JUL	161.5	91.28	3522	3369	
SIGMA 3	METAL OBJECT	188	US	12 JUL	160.6	91.36	3500	3316	
SIGMA 4	METAL OBJECT	196	US	12 JUL	161.9	91.22	3579	3345	
UPSILON 1	EXPLORER 12	170	US	16 AUG	CURRENT ELEMENTS NOT MAINTAINED				
A DELTA 1	MIDAS 4	192	US	21 OCT	166.0	95.87	3730	3523	
A DELTA 3	METAL OBJECT	194	US	21 OCT	165.6	95.84	3715	3507	
A DELTA 4	METAL OBJECT	195	US	21 OCT	166.4	95.83	3774	3513	
A ETA 1	TRANSIT 4B	202	US	15 NOV	105.8	32.44	1111	948	
A ETA 2	TRAAC	205	US	15 NOV	105.8	32.41	1101	960	
A ETA 3	ROCKET BODY	204	US	15 NOV	105.6	32.42	1104	942	
1962 LAUNCHES									
ALPHA 1	RANGER 3	221	US	26 JAN	HELIOCENTRIC ORBIT				
ALPHA 2	ROCKET BODY	222	US	26 JAN	HELIOCENTRIC ORBIT				
BETA 1	TIROS 4	226	US	8 FEB	100.4	48.31	849	702	
BETA 2	ROCKET BODY	227	US	8 FEB	101.4	48.16	950	694	
BETA 3	METAL OBJECT	228	US	8 FEB	99.5	48.42	766	700	
BETA 4	METAL OBJECT	229	US	8 FEB	100.3	48.30	838	707	
• ZETA 1	ORB.SOL.OBS. 1	255	US	7 MAR	96.0	32.83	598	537	
ZETA 2	ROCKET BODY	257	US	7 MAR	96.0	32.83	583	550	
KAPPA 1		271	US	9 APR	153.0	86.69	3378	2819	
KAPPA 3		273	US	9 APR	152.6	86.67	3365	2800	
• KAPPA 4		274	US	9 APR	153.3	86.68	3425	2801	
MU 2	ROCKET BODY	282	US	23 APR	HELIOCENTRIC ORBIT				
OMICRON 1	ARIEL 1	285	US/UK	26 APR	100.5	53.88	1172	397	136.406
OMICRON 2	ROCKET BODY	288	US/UK	26 APR	100.5	53.87	1167	392	

OBJECTS IN ORBIT

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1962 LAUNCHES (CONT'D)									
A ALPHA 1	TIROS 5	309	US	19 JUN	100.5	58.11	965	597	
A ALPHA 2	ROCKET BODY	311	US	19 JUN	100.4	58.11	954	600	
A ALPHA 3	METAL OBJECT	312	US	19 JUN	101.7	58.22	1077	606	
A ALPHA 4	METAL OBJECT	313	US	19 JUN	99.1	58.00	850	581	
A EPSILON 1	TELSTAR 1	340	US	10 JUL	157.8	44.80	5643	944	
A EPSILON 2	ROCKET BODY	341	US	10 JUL	157.6	44.80	5632	942	
A OMICRON 1		369	US	23 AUG	99.5	98.70	860	615	
A OMICRON 2		370	US	23 AUG	98.2	98.65	753	599	
A OMICRON 3		378	US	23 AUG	100.8	98.71	976	619	
A OMICRON 4		388	US	23 AUG	99.5	98.70	858	616	
A RHO 1	MARINER	374	US	27 AUG	HELIOCENTRIC ORBIT				
A RHO 2	ROCKET BODY	375	US	27 AUG	HELIOCENTRIC ORBIT				
A UPSILON 1		385	US	1 SEP	91.1	82.80	396	266	
A PSI 1	TIROS 6	397	US	18 SEP	98.7	58.31	706	690	
A PSI 2	ROCKET BODY	398	US	18 SEP	98.7	58.33	704	686	
A PSI 3	METAL OBJECT	399	US	18 SEP	99.4	58.44	771	687	
A PSI 4	METAL OBJECT	400	US	18 SEP	98.0	58.21	694	636	
B ALPHA 1	ALOUETTE	424	CANADA	29 SEP	105.5	80.47	1037	999	136.978
									\$136.590\$136.077
B ALPHA 2	ROCKET BODY	426	US	29 SEP	105.4	80.48	1031	999	
B ALPHA 3	METAL OBJECT	510	US	29 SEP	105.4	80.52	1020	1005	
B ALPHA 4	METAL OBJECT	511	US	29 SEP	105.5	80.43	1046	990	
B GAMMA 1	EXPLORER 14	432	US	2 OCT	CURRENT ELEMENTS NOT MAINTAINED				
B GAMMA 2#	ROCKET BODY	NNA	US	2 OCT	CURRENT ELEMENTS NOT MAINTAINED				
B ETA 1	RANGER 5	439	US	18 OCT	HELIOCENTRIC ORBIT				
B ETA 2	ROCKET BODY	440	US	18 OCT	HELIOCENTRIC ORBIT				
B KAPPA 1		444	US	26 OCT	133.5	71.42	4355	190	
B LAMBDA 1	EXPLORER 15	445	US	27 OCT	312.5	18.04	17436	307	

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1962 LAUNCHES (CONT'D)									
B LAMBDA 2#	ROCKET BODY	NNA	US	27 OCT	INSUFFICIENT OBSERVATIONS				
B MU 1	ANNA 1B	446	US	31 OCT	107.9	50.16	1178	1081	162;324
B MU 2	ROCKET BODY	447	US	31 OCT	107.6	50.15	1175	1057	
B NU 3		450	USSR	1 NOV	HELIOCENTRIC ORBIT				
B TAU 1		502	US	13 DEC	110.2	70.36	2246	229	
B TAU 2	INJUN 3	504	US	13 DEC	113.0	70.34	2487	238	
B TAU 4		508	US	13 DEC	106.9	70.36	1950	222	
B TAU 5		513	US	13 DEC	110.1	70.35	2238	222	
B TAU 6		520	US	13 DEC	112.3	70.34	2437	233	
B UPSILON 1	RELAY 1	503	US	13 DEC	185.1	47.51	7445	1314	136.140 \$136.620
B UPSILON 2	ROCKET BODY	515	US	13 DEC	184.9	47.52	7425	1316	
B CHI 1	EXPLORER 16	506	US	16 DEC	104.4	52.01	1188	741	
B PSI 1	TRANSIT 5A	509	US	19 DEC	99.1	90.64	730	702	
B PSI 2		514	US	19 DEC	97.7	90.75	720	581	
B PSI 3		519	US	19 DEC	99.1	90.64	733	698	
B PSI 4		523	US	19 DEC	100.2	90.48	839	700	
1963 LAUNCHES									
1963 03A		527	US	16 JAN	94.5	81.89	528	462	
1963 04A	SYNCOM 1	553	US	14 FEB	CURRENT ELEMENTS NOT MAINTAINED				
1963 04B	ROCKET BODY	532	US	14 FEB	CURRENT ELEMENTS NOT MAINTAINED				
1963 05A		533	US	19 FEB	97.7	100.50	796	503	
1963 05B		534	US	19 FEB	97.7	100.50	798	502	
1963 05C		535	US	19 FEB	96.9	100.51	752	471	
1963 05D		536	US	19 FEB	98.3	100.51	844	518	
1963 08B		566	USSR	2 APR	BARYCENTRIC ORBIT				
1963 09A	EXPLORER 17	564	US	3 APR	95.1	57.62	789	256	
1963 13A	TELSTAR 2	573	US	7 MAY	225.3	42.75	10814	958	136.050

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1963 LAUNCHES (CONT'D)									
1963 13B	ROCKET BODY	575	US	7 MAY	225.1	42.64	10791	965	
1963 14A		574	US	9 MAY	166.4	87.31	3731	3560	
1963 14B		579	US	9 MAY	166.4	87.31	3784	3508	
1963 14C		608	US	9 MAY	166.4	87.35	3652	3639	
1963 14D		589	US	9 MAY	CURRENT	ELEMENTS	NOT	MAINTAINED	
1963 14E		602	US	9 MAY	166.1	87.44	3645	3618	
1963 14F		628	US	9 MAY	166.8	87.39	3691	3631	
1963 14G		629	US	9 MAY	166.4	87.34	3651	3639	
1963 14H		702	US	9 MAY	166.4	87.07	3791	3496	
1963 17A		580	USSR	22 MAY	92.8	48.96	577	246	
1963 17C		582	USSR	22 MAY	94.2	49.17	627	327	
1963 22A		594	US	16 JUN	99.7	90.01	759	732	150;400
1963 22B		603	US	16 JUN	99.7	90.00	755	735	
1963 22C		610	US	16 JUN	101.2	90.21	899	737	
1963 22D		611	US	16 JUN	98.1	89.82	774	569	
1963 24A	TIROS 7	604	US	19 JUN	97.4	58.25	650	622	136.234 136.921
1963 24B	ROCKET BODY	605	US	19 JUN	97.4	58.23	648	617	
1963 24C	METAL OBJECT	606	US	19 JUN	97.9	58.38	682	633	
1963 24D	METAL OBJECT	607	US	19 JUN	96.9	58.10	644	576	
1963 25B		614	US	27 JUN	132.4	82.13	4115	338	
1963 26A	RESEARCH SATELLITE FOR GEOPHYSICS	612	US	28 JUN	102.1	49.76	1295	418	
1963 27A		613	US	29 JUN	94.7	82.32	524	486	
1963 27B		615	US	29 JUN	93.1	82.30	436	421	
1963 30A		622	US	19 JUL	167.8	88.42	3770	3635	
1963 30B		635	US	19 JUL	167.8	88.40	3736	3669	
1963 30C		630	US	19 JUL	167.5	88.40	3711	3665	
1963 30D		624	US	19 JUL	167.9	88.35	4160	3248	
1963 30E		631	US	19 JUL	168.3	88.44	3770	3669	

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1963 LAUNCHES (CONT 'D)									
1963 31A	SYNCOM 2	634	US	26 JUL	1439.3	32.63	35903	35796	\$136.980; \$136.468\$1814.069; \$1815.794\$1820.177
1963 31B	ROCKET BODY	625	US	26 JUL	CURRENT ELEMENTS NOT MAINTAINED				
1963 38A		669	US	28 SEP	107.1	89.91	1106	1081	
1963 38B		670	US	28 SEP	107.4	89.90	1134	1077	
1963 38C		671	US	28 SEP	107.3	89.91	1133	1077	136.652
1963 38D		672	US	28 SEP	107.3	89.91	1130	1080	
1963 38E		745	US	28 SEP	107.1	89.92	1113	1072	
1963 39A		674	US	17 OCT	6480.8	38.37	116383	101152	
1963 39B		675	US	17 OCT	2319.4	35.90	102372	953	
1963 39C		692	US	17 OCT	6518.0	37.22	116329	102087	
1963 42B		682	US	29 OCT	92.4	89.98	508	281	
1963 43A	POLYOT	683	USSR	1 NOV	102.4	58.94	1405	337	
1963 43B		684	USSR	1 NOV	101.3	58.63	1309	328	
1963 43C		685	USSR	1 NOV	99.3	58.97	1147	301	
1963 43D		686	USSR	1 NOV	101.1	59.83	1276	343	
1963 46A	EXPLORER 18	693	US	27 NOV	5599.5	35.29	194077	2073	136.112
1963 47A	CENTAUR 2	694	US	27 NOV	107.8	30.36	1785	464	
1963 47B		696	US	27 NOV	107.3	30.06	1623	574	
1963 47C		697	US	27 NOV	107.5	30.05	1666	552	
1963 47D		698	US	27 NOV	108.0	29.91	1655	613	
1963 47E		699	US	27 NOV	108.7	30.39	1754	571	
1963 47F		700	US	27 NOV	108.7	30.47	1768	558	
1963 47G		701	US	27 NOV	107.8	30.00	1635	615	
1963 47H		739	US	27 NOV	107.7	30.40	1669	570	
1963 49A		703	US	5 DEC	106.8	89.96	1097	1063	
1963 49B		704	US	5 DEC	107.1	89.97	1125	1065	150;400

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1963 LAUNCHES (CONT'D)									
1963 49C		705	US	5 DEC	107.1	89.96	1126	1063	54;162;324; 648
1963 49D		706	US	5 DEC	107.1	89.96	1125	1059	
1963 49E		715	US	5 DEC	107.1	89.98	1120	1068	
1963 49F		753	US	5 DEC	107.1	89.97	1136	1053	
1963 53A	EXPLORER 19	714	US	19 DEC	115.6	78.62	2371	596	
1963 53B		721	US	19 DEC	115.8	78.64	2396	587	
1963 53C		722	US	19 DEC	115.8	78.63	2450	537	
1963 53D		723	US	19 DEC	115.9	78.65	2428	567	
1963 53E		724	US	19 DEC	115.9	78.64	2373	605	
1963 53F		725	US	19 DEC	115.9	78.62	2399	592	
1963 53G		726	US	19 DEC	115.8	78.58	2389	598	
1963 53H		732	US	19 DEC	115.8	78.60	2391	597	
1963 54A	TIROS 8	716	US	21 DEC	99.4	58.51	751	706	136.233 136.923
1963 54B		717	US	21 DEC	99.3	58.50	743	708	
1963 54C		720	US	21 DEC	101.1	58.49	913	706	
1963 54D		736	US	21 DEC	97.7	58.52	716	580	
1963 55B		719	US	21 DEC	90.9	64.54	346	292	
1964 LAUNCHES									
1964 1A		727	US	11 JAN	103.4	69.93	937	908	
1964 1B	GGSE	728	US	11 JAN	103.4	69.93	939	906	
1964 1C	EGRS	729	US	11 JAN	103.4	69.91	933	911	136.803
1964 1D	SOLAR RADIATION	730	US	11 JAN	103.5	69.91	934	911	136.886
1964 1E		731	US	11 JAN	103.5	69.92	935	911	
1964 2A		733	US	19 JAN	101.3	99.06	834	811	
1964 2B		734	US	19 JAN	101.3	99.04	827	813	
1964 2C		735	US	19 JAN	101.3	99.07	832	811	
1964 3A	RELAY 2	737	US	21 JAN	194.7	46.34	7416	2083	136.141 \$136.621

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1964 LAUNCHES (CONT 'D)									
1964 03B		738	US	21 JAN	194.8	46.47	7377	2128	
1964 04A	ECHO 2	740	US	25 JAN	108.7	81.47	1332	1003	136.021; 136.170
1964 04B		741	US	25 JAN	108.9	81.51	1310	1046	
1964 04C		742	US	25 JAN	108.8	81.48	1307	1042	
1964 04D		743	US	25 JAN	108.8	81.54	1310	1038	
1964 04E		749	US	25 JAN	99.3	81.58	1151	299	
1964 05A	SATURN 5	744	US	29 JAN	94.2	31.44	699	257	
1964 06A	ELEKTRON 1	746	USSR	30 JAN	169.3	60.86	7119	402	
1964 06B	ELEKTRON 2	748	USSR	30 JAN	1356.3	60.01	67820	602	
1964 06C		750	USSR	30 JAN	168.2	60.85	7035	397	
1964 06D		751	USSR	30 JAN	1384.1	60.11	68932	584	
1964 10A	COSMOS 25	757	USSR	27 FEB	91.4	49.03	430	254	
1964 11A		759	US	28 FEB	94.6	82.08	513	492	
1964 11B		760	US	28 FEB	94.3	82.06	494	481	
1964 11C		761	US	28 FEB	94.4	82.09	499	483	
1964 13A	COSMOS 26	766	USSR	18 MAR	90.3	48.97	322	252	
1964 15A	ARIEL 2	771	US/UK	27 MAR	101.1	51.66	1337	287	136.558
1964 15B		775	US/UK	27 MAR	101.0	51.64	1323	286	
1964 16D		785	USSR	2 APR	HELIOCENTRIC ORBIT				
1964 19B	POLYOT 2	784	USSR	12 APR	92.3	58.06	464	309	
1964 26A		801	US	4 JUN	103.1	90.48	956	855	
1964 26B		805	US	4 JUN	103.9	90.19	989	898	
1964 26C		806	US	4 JUN	102.3	90.83	948	792	
1964 26D		809	US	4 JUN	103.1	90.40	943	868	
1964 28A	COSMOS 31	803	USSR	6 JUN	91.4	48.98	465	218	
1964 28B		804	USSR	6 JUN	91.1	48.96	425	223	
1964 29B		808	USSR	10 JUN	89.4	51.25	258	226	
1964 30A		811	US	13 JUN	91.7	114.93	362	350	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>NODAL PERIOD</u>	<u>INCLI - NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1964 LAUNCHES (CONT'D)									
1964 30B		820	US	13 JUN	91.9	114.97	386	353	
1964 31A		812	US	18 JUN	101.6	99.83	838	831	
1964 31B		813	US	18 JUN	101.6	99.83	841	829	
1964 31C		815	US	18 JUN	101.6	99.85	840	827	
1964 32A		814	US	19 JUN	90.6	85.02	431	182	
1964 32B		821	US	19 JUN	90.0	85.11	372	169	
1964 33A	COSMOS 33	816	USSR	23 JUN	89.48	65.01	306	211	
1964 33B		817	USSR	23 JUN	89.2	64.96	258	212	

PLEASE ADD THE FOLLOWING TO THE DECAY OBJECTS LIST:

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1964 10B		758	USSR	27 FEB	18 JUN 64
1964 27A		802	US	4 JUN	18 JUN 64
1964 29A	COSMOS 32	807	USSR	10 JUN	18 JUN 64
1964 33C		818	USSR	23 JUN	24 JUN 64
1964 33D		819	USSR	23 JUN	24 JUN 64

- * APHELION PERIHELION IN ASTRONOMICAL UNITS, INCLINATION TO ECLIPTIC.
- ** TWO HUNDRED AND FOUR METAL OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1961 OMICRON 1 AND 1961 OMICRON 2. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS.
- \$ TRANSMITTING ON COMMAND ONLY.
- & TRANSMITTING WHEN IN SUNLIGHT ONLY.
- # NO CATALOGUE NUMBER ASSIGNED